

Claims

1. Components or arrangement with such components in the form of panels or planks, which may be coated on the top surface and/or underside with plastic laminates, etc., made of wood, wood products or wood-based products such as panels, sheets, floor panels, wooden siding and cladding, etc.,

- wherein the longitudinal edges (7) of the components (1, 2) are provided with matching projections and/or recesses, preferably tongues (5) and grooves (6), with which adjacent components (1, 2) can be joined,
 - wherein in the underside (15) of each component (1, 2), parallel to the longitudinal edges and if need be also parallel to the transverse edges (7), two groove-shaped recesses (8, 9, 8', 9') are formed to accommodate the retaining elements (10, 12) of at least one clip (11) provided under the components (1, 2), with which clip the adjacent components (1, 2) are held together or pressed together by their edges (7);
 - wherein the retaining elements (10, 12) extend or are bent upward from the clip base body (17);
 - wherein one of the two retaining parts (10) can be applied to the inside surface (13) proximate to the end edge of a recess (8, 9') of one component (1) and the other retaining element (12) can be applied to the edge-proximate inside surface (20) of a recess (8', 9) of the adjacent, joined component (2); and
 - wherein one of the retaining elements (10), preferably the retaining element (10) provided in recess (8) in the grooved edge, is a flange element extending or bent upward,
- characterized in that
- the other retaining element, which is adapted to engage in recess (8', 9) of the joined component (2), preferably in the recess (8', 9) near the tongued edge (7), is formed by a detent (12) whose free end section can, if need be, include an elastically or resiliently displaceable locking element (18), which in unstressed position extends diagonally upward from the clip base body (17) in the direction of

30 the plane defined by edges (7) of components (1, 2), and which cantilevers or
31 extends upward.

1 2. Components or arrangement according to Claim 1, characterized in that the
2 detent (12) in stressed condition or in locking position is or can be elastically turned,
3 adjusted, pivoted or swivelled downward into or below the plane of the clip base
4 (17).

1 *Self 91* 3. Components or arrangement according to Claim 1 or 2, characterized in that
2 the two recesses (8, 9) running parallel to the longitudinal edges (7) are mirror-
3 symmetrical in relation to the longitudinal centre plane of the corresponding
4 component (1, 2).
5

1 4. Components or arrangement according to one of Claims 1 to 3,
2 characterized in that the clip base (17) carries between the upward extending flange
3 element (10) and the detent (12) another flange element (19) extending upward,
4 which can be applied against the edge (7) of the component (1) accommodating the
5 upward extending flange element (10), wherein if need be, the two flange elements
6 (10, 19) are inclined toward each other and with surface (14) enclose the same
7 angle between 60° and 80°, wherein the edge area (22) of edge (7), against which
8 the flange element (19) can be applied, is inclined toward the surface (14) of the
9 component (1, 2) at the same angle as the flange element (19).

1 5. Components or arrangement according to one of Claims 1 to 4,
2 characterized in that the detent (12), the flange element (10) and the additional
3 flange element (19) are punched out of the clip base (17) which is made of spring-
4 elastic metal.

1 6. Components or arrangement according to one of Claims 1 to 5,
2 characterized in that the edge-proximate inside surfaces (13, 20) of the two
3 longitudinal recesses (8, 9) and one of the two transverse recesses (9') against
4 which the flange element (10) or the detent (12) can be applied, particularly with a

5 deflected or bent locking element (18), enclose an angle (α) smaller than 90° ,
6 preferably an angle between 50° and 80° , with the surface (14) of the component
7 (1, 2), and that the edge-proximate inside surface (21) of the other transverse
8 recess (8') against which the detent (12) can be applied, encloses an angle (α')
9 larger than 90° , preferably an angle between 110° and 130° , with the surface (14)
10 of the component (1, 2).

1 7. Components or arrangement according to one of Claims 1 to 6,
2 characterized in that when the detent (12) is tilted into the plane of the clip base
3 body (17), the locking element (18) of the detent (12), with the surface (14) of the
4 component (1, 2), encloses an angle which corresponds to the angle enclosed by the
5 edge-proximate inside surface (13, 20) with the surface (14) of the component (1,
6 2).

7 8. Components or arrangement according to one of Claims 1 to 7,
8 characterized in that the edge-proximate edge area (23) of the recess (9)
9 accommodating the detent (12) is bevelled, reduced in size or rounded.

1 9. Components or arrangement according to one of Claims 1 to 8,
2 characterized in that the edge-proximate inside surface (21) of one of the transverse
3 recesses (8') can be applied against the detent (12) or its locking element (18), and
4 that the locking element (18) of this detent (12) is inclined in the direction opposite
5 to that of the surface (14) of the components (1, 2), that they each enclose
6 different angles, whereby the outside end edge (25) of the inside surface (24) of
7 recess (8') is closer to the transverse edge (7') of the corresponding component (1,
8 2) than the inside end edge (26).

1 10. Components or arrangement according to one of Claims 1 to 9,
2 characterized in that the edge-proximate inside surface (29) of the recesses (8, 8',
3 9, 9') is rounded or runs at an angle (γ) of incline between 15° and 40° , preferably
4 between 20° and 35° , in relation to the surface (14).

1 11. Components or arrangement according to one of Claims 1 to 10,
2 characterized in that the edges (7) of the components (1, 2), which may have a
3 plane underside (15) for lying on a plane underlay, adjoin each other at surface level
4 but have a space between each other at bottom level (33).

1 12. Components or arrangement according to one of Claims 1 to 11,
2 characterized in that the centre plane of the clip (11) is vertically symmetrical in
3 relation to the longitudinal direction of the components (1, 2).

1 13. Components or arrangement according to one of Claims 1 to 12,
2 characterized in that in a clip base body (17), a multiple of flange elements (10, 19)
3 and/or detents (12) are provided, lying side by side in a row.

1 14. Components or arrangement according to one of Claims 1 to 13,
2 characterized in that the detent (12) is concavely bent downward.

1 15. Components or arrangement according to one of Claims 1 to 14,
2 characterized in that at least one recess (28) is formed in the transitional or
3 connection area (38) between the detent (12) and the clip base body (17).

1 16. Components or arrangement according to one of Claims 1 to 15,
2 characterized in that from at least one of the edges (7) of a component (1, 2), two
3 legs extend, forming a groove (5) between them, and that into this groove (5) a
4 tongue (6) coming from one of the edges of the other component (2) can be
5 inserted, whereby, if need be, the leg (4) at underside level is shorter than the leg
6 (3) at top surface level.

1 17. Components or arrangement according to one of Claims 1 to 16,
2 characterized in that the detent (12) extends diagonally upward from the clip base
3 body (17) at an angle (β) of 10° to 30°, preferably 15° to 25°.

1 18. Components or arrangement according to one of Claims 1 to 17,
2 characterized in that the detent (12) curves and ends in the locking element (18).

1 *alt* 19. Components or arrangement according to one of Claims 1 to 18,
2 characterized in that the two recesses (8', 9'), which run parallel to the transverse
3 edges (7') of a component (1, 2), have an incline that is comparable to that of their
4 edge-proximate inside surfaces (13, 21).

1 20. Clip for components or an arrangement according to one of Claims 1 to 19,
2 characterized in that the clip (11) is provided with at least two upward projecting
3 retaining elements (10, 12), one of which is a flange element (10) bent upward from
4 the clip base body (17), characterized in that the other retaining element (12) is
5 formed by an elastically or resiliently displaceable detent (12) extending upward,
6 whereby the detent (12), which may hold in its free end section an upward
7 extending locking element (18), may in unstressed position extend from the clip
8 base body (17) diagonally upward in the direction of the retaining element (10), and
9 whereby between the upward-extending flange element (10) and the detent (12),
10 the clip base body (17) holds an additional flange element (19) that is also extending
11 upward.

1 21. Clip according to Claim 20, characterized in that in stressed position, the
2 detent (12) can be moved elastically from its stationary position downward in the
3 direction of the clip base body (17), or that it can be deflected or adjusted through
4 the said clip base body.

1 *un* 22. Clip according to Claim 20 or 21, characterized in that in the lateral end
2 sections of the flange element (10) and/or the additional flange element (19), bent
3 engagement elements, in particular hooked or pointed deflections (41) are formed.

1 23. Clip according to one of claims 20 to 22, characterized in that it has one
2 or more of the characteristics of Claims 2, 4, 5, 7, 12 to 15, 17 or 18.